

**Amendments to the claims:****Please cancel Claims 16-21.**

1. **(Previously amended)** A low energy method of pyrolysis of hydrocarbon material comprising:
  - providing said hydrocarbon material;
  - loading said hydrocarbon material into a reaction chamber;
  - adding a catalyst to said reaction chamber, and
  - heating said reaction chamber for a sufficient time to provide substantially complete pyrolysis,
  - said heating occurring in at least a first, second and third phases and fuel input is adjusted to take advantage of the exothermic nature of the reaction;
  - said method occurring while maintaining a vacuum in said reaction chamber and yielding reaction products comprising a solid carbonaceous residue, a liquid hydrocarbon product and a combustible gas.
2. **(Original)** The method of Claim 1, wherein said catalyst is clay.
3. **(Original)** The method of Claim 2, wherein said clay is selected from the group consisting of montmorillonite, bentonite, beidillite and combinations thereof.
4. **(Original)** The method of Claim 2, wherein said clay is pillared clay.
5. **(Original)** The method of Claim 2, wherein said clay is a natural ore.
6. **(Original)** The method of Claim 1, wherein said catalyst is a commercial clay containing product.
7. **(Original)** The method of Claim 6, wherein said commercial clay product is selected from the group consisting of cat litter and oil spill absorbent and combinations thereof.
8. **(Original)** The method of Claim 2, wherein said catalyst is added in an amount of about 0.01 wt.% to 3.0 wt.%, based on the total weight of said hydrocarbon material.
9. **(Original)** The method of Claim 1, wherein said heating of said reaction chamber results in a reaction temperature of said hydrocarbon material of between about 150° to 850° F.
10. **(Original)** The method of Claim 1, wherein said reaction temperature of said hydrocarbon material is maintained at between about 350° to 850°F.
11. **(Cancelled)**

**12. (Previously amended)** The method of Claim 1, wherein said first, second and third phase occur sequentially over time.

**13. (Previously amended)** The method of Claim 1, wherein said first, second and third phase occur sequentially over space, as said hydrocarbon material moves through said reaction chamber.

**14. (Original)** The method of Claim 1, wherein said vacuum is maintained at a pressure of between about 2 inches to 16 inches mercury.

**15. (Previously amended)** The method of Claim 1, wherein said vacuum is maintained at pressure of between about 2 inches to 16 inches mercury.

**16 – 21 (Cancelled)**

**22 – 26 (Withdrawn)**